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| 10/687,837 | 10/20/2003 | Kenshou Miyatake | 010482.52834US | 2005 |
| 23911 7590 09/10/2007 CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300 | | | EXAMINER GOMA, TAWFIK A | |
| | | | ART UNIT 2627 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/687,837

Applicant(s)

MIYATAKE, KENSHOU

Examiner

Tawfik Goma

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-16 is/are pending in the application.
- 4a) Of the above claim(s) 6-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

This action is in response to the RCE filed on 3/9/2007 and the Election of Species filed on 6/27/2007.

Election/Restrictions

Applicant's election with traverse of Species C (figure 3) in the reply filed on 6/27/07 is acknowledged. The traversal is on the ground(s) that the examiner has not provided different searches for the species to show burden. This is not found persuasive because as noted in the Requirement for Election, a species restriction is proper if it can be shown that the species require a different field of search (e.g., searching different classes/subclasses or electronic resources, or employing different search queries). In the instant case, different search queries would have to be generated to search for the pickup as shown in Species A, B and C because they require different elements and arrangement of elements within the pickup (i.e. a polarized beam splitter, a half mirror, a grating on the polarized beam splitter, a grating on a half mirror, separate photodetectors, a single photodetector with separate photodetecting sections, etc.). Searching for the different combinations of elements in the Species would place an undue burden on the examiner because of the number of search queries that would have to be generated.

The requirement is still deemed proper and is therefore made FINAL.

Applicant elected claims 3-6 as readable on Species C in the response. However, claim 6, which requires that the grating be placed on a beam splitter is not encompassed by Species C. As shown in figure 3, the grating 13 is separate from the half mirror (2) which acts as the beam splitting element. Therefore, claim 6 is withdrawn from consideration.

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Claims 6-16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 6/27/2007.

Claim Objections

Claim 3 is objected to because of the following informalities: The limitation has a misspelling of the word grating and recites "granting" instead. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al (US 5526336) in view of Takeda et al (5648950) and further in view of Takahashi (US 5963531).

Regarding claim 3, Park discloses an optical pickup device for writing data or reading data recorded on an optical disk (fig. 8), said optical pickup device comprising: a laser light source for emitting a laser beam for writing data or reading data (1A, 1B, fig 8); photodetectors having light-receiving portions for respectively receiving the laser beam reflected by the recording surfaces of a plurality of layers of the optical disk (11A, 11B, fig. 8); and an optical system for guiding to the optical disk the laser beam emitted from the laser light source (22, 23, 4, 5, fig. 8) and guiding to the photodetectors the laser beam reflected by the optical disk (23, fig. 8 and 21, fig. 7); said optical system having: an object lens for condensing the laser beam (5, fig.

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8) onto the optical disk, having a curvature or refractive index that varies by steps in the radial direction (5, fig. 8), and comprising a multifocal lens for focusing on a plurality of recording surfaces of the optical disk (4, 5, fig. 8) and a collimator lens (2, fig. 7) for converting transmitted light to parallel light. Park further discloses wherein the object lens condenses the laser beam emitted from one laser light source onto the recording surfaces of the multiple layers of the optical disk (7, 8, fig. 8), so as to simultaneously read or write data to the recording surfaces of the layers (col. 5 lines 33-44). Park fails to disclose wherein the optical system includes a half mirror for reflecting or transmitting a laser beam emitted from the laser light source, and transmitting or reflecting the light reflected from the optical disk and a diffraction grating for diffracting a part of the laser beam transmitted through the half mirror and guiding the laser beam to at least one of the light-receiving portions; a collimator lens for converting the light transmitted or reflected into parallel light. In the same field of endeavor, Takeda discloses a rising mirror (13, fig. 15) and a diffraction grating (12, 17, fig. 15) for guiding light transmitted through a half mirror (13, fig. 16) to different light receiving portions of a photo-detector (fig. 16 and fig. 17). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the optical system disclosed by Park with the features disclosed by Takeda. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to use a rising mirror and a diffraction grating for directing light to different parts of a photodetector in order to properly detect light that has different polarization used during recording and to reduce the size of the optical system used by Park (see Takeda col. 2 lines 66-67 thru col. 3 lines 1-2).

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Further regarding claim 3, Park in view of Takeda fail to disclose wherein the diffraction grating is spatially separated from the half mirror. In the same field of endeavor, Takahashi discloses providing a grating (5a, 5b, fig. 2) that is spatially separated from a half mirror (4, fig. 2). It would have been obvious to one of ordinary skill in the art to provide a grating that is separated from the half mirror. The rationale is as follows: One of ordinary skill in the art would have been motivated to provide the grating as a separate element in order to finely adjust the parameters of both the grating and the half mirror during the manufacturing process of the pickup.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al (US 5526336) in view of Takeda (US 5648950) and Takahashi (US 5963531) as applied to claim 3 above, and further in view of Hayata (JP 10302403 A).

Regarding claim 4, Park in view of Takeda and Takahashi disclose everything claimed as applied above (see claim 3). Park discloses simultaneous playback of the recording layers (col. 5 lines 33-3) but fails to disclose storage means for saving the data of another of the recording surfaces. In the same field of endeavor, Hayata discloses simultaneously reading data from different layers of a DVD and storage means for storing the read out by the reading means (see abstract, and 13a, 13b fig. 1). It would have been obvious to one of ordinary skill in the art to modify the device disclosed by Park in view of Takeda and Takahashi by providing storage means for storing the data of the other recording layer. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to provide storage means in order to compound data from different recording layers during reproduction (see Hayata par. 18)

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Claim 5 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Park et al (US 5526336) in view of Takeda et al (5648950) and Takahashi (US 5963531), as applied to claim 3 above, and further in view of Nakamura et al (US 2003/0048737).

Regarding claim 5, Park in view of Takeda and Takahashi disclose everything claimed as applied above (see claim 3). Park in view of Takeda and Takahashi fail to disclose wherein the collimator lens is disposed between the half mirror and the optical disk and the objective lens is between the collimator lens and the optical disk. In the same field of endeavor, Nakamura discloses a collimator lens between a half mirror and an objective lens and the objective lens between the collimator lens and the disk (13, fig. 1). It would have been obvious to one of ordinary skill in the art to modify the system disclosed by Park in view of Takeda and Takahashi by providing the collimator lens on the other side of the half mirror. The rationale is as follows: One of ordinary skill in the art would have been motivated to provide the collimator lens between the half mirror and the objective lens in order to collimate both the emitted light from the laser as well as the return light reflected by the disk (fig. 1 of Nakamura).

Response to Arguments

Applicant's arguments with respect to claims 3-5 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tawfik Goma whose telephone number is (571) 272-4206. The examiner can normally be reached on 8:30 am - 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tawfik Goma/
8/31/2007

/William R. Korzuch/

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